

notum rather narrow, elongate, with a group of setæ near the apex. Postscutellum clothed with dull brown scales and with many pale setæ, somewhat produced at the middle where there is a double ridge of erect scales. Abdomen long and slender, blunt at the apex, the cerci small, slender and pointed. Vestiture of the abdomen above dull brown, beneath dull yellowish bronze. Wings rather broad, the scales of the veins brown and mostly narrow. Basal cross-vein slightly oblique, more than its own length behind the anterior cross-vein. Knobs of the halteres brown scaled. Legs brownish black, unicolorous. Claws small and simple.

Length of body, about 5 mm. ; of wing, 4 mm.

Male: Very similar to the female. The antennæ even longer; the third segment hardly shorter than the second, the fourth but little shorter than the third; terminal segments much shortened. Palpi slender, about equal to those of the female in length. Abdomen subcylindrical, slightly expanded at the apex and with large very stout claspers. All the claws simple, those of the front and middle legs very long, those of the hind legs small.

Length of body, 4 mm. ; of wing, 4 mm.

Locality. — Port Limon, Costa Rica (2 ♀♀, 1 ♂, F. Knab).

Type. — No. 10291, U. S. National Museum.

This mosquito has a deceptive resemblance to *Deinocerites cancer* Theob. and like it occurs in crab-holes. My remarks in *Psyche*, xiii, p. 95, on the occurrence of *Deinocerites cancer* at Port Limon apply to this species. At the time the article was written the specimens in question were in the hands of Mr. Coquillett and were not accessible for study.

DEINOCERITES AGAIN.

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In *Psyche* for February, 1907, Miss Evelyn G. Mitchell, attempts to defend the subfamily Deinoceritinæ, erected by her in *Psyche*, xiii, 1906, pp. 11–21. The last article is so pretentious in character and presents such a mixture of ideas that it calls for some criticism.

I will first take up the larval characters of *Deinocerites* which are made use of by Miss Mitchell. While in her original article it is not directly stated that the “groove” is a unique structure, one is led to infer from her statements that this was her belief. What I asserted in my article on *Deinocerites*, *Psyche*, xiii, pp. 96–97, and still maintain, is that a mere matter of difference in size and shape of the structure in question can have no great systematic value. The “angulation” of

the chitinous piece in question, which Miss Mitchell insists is such an important feature, is largely illusory. The figure of the under side of the head which I gave in *Psyche* was carefully drawn from a head in horizontal position and I believe is a correct representation of the head when thus viewed. When the larva is examined from above the head is deflected and the lobes projecting at the sides are seen in perspective and present the angular appearance noted by Miss Mitchell. It will be unnecessary to discuss at this time the mandibular structures of mosquito larvæ. I simply assert that the structures pointed out by Miss Mitchell are not of primary importance. If one adopted Miss Mitchell's method of classification, *Lesticocampa*, in which the larva has enormous maxillæ projecting far beyond the antennæ, shaped like mandibles and armed with several long sharp teeth, would on such a remarkable structure have to be removed from the Diptera altogether! Her simile in this connection of the tails of monkeys throws an interesting sidelight on her ideas of classification which would certainly astonish vertebrate zoologists. Would she propose to remove the South American short-tailed *Brachyurus* from the Platyrrhine group and mercilessly throw it among the old world apes?

It will be as well, on this occasion, to dispose of Miss Mitchell's subfamily Psorophorinæ. *Lutzia bigoti* has a predaceous larva, in all the details of the mouth parts like that of *Psorophora*. But by no artifice can the adult of this mosquito be associated with *Psorophora*. It is only by the very large empodia that this form is generically separable from *Culex*, an adaptive structure to enable this large mosquito to rest upon the water. The larval structure is purely adaptive to habits and doubtless acquired quite independently.

But it is when we turn to the adult characters that the crudity of Miss Mitchell's ideas becomes most obvious. It is certainly a great wrong to Osten Sacken to misquote him in the manner she has. The striking differences in the antennæ of the Nemocera anomala from those of the true Nemocera lie in the brevity of the segments and the absence of the whorls of sensory hairs. Anyone who has examined the antennæ of a *Simulium* or a Bibionid will appreciate the difference. The antennæ of *Deinocerites* differ from those of most other Culicids merely in the greater relative length of some of the segments; as a result the whorls of hairs are less conspicuous, but present they are. How any member of so homogeneous and specialized a group as the mosquitoes can be considered "primitive," least of all one with such

specialized habits as *Deinocerites*, is incomprehensible. Moreover a mosquito which has similarly elongated antennal segments but belonging to a distinct group, the Sabethinæ, and described in the preceding article, has recently come to light. Furthermore *Culex latisquamma* Coq. has a distinctly elongated second segment of the antennæ. As all three of these species live in crab-holes it becomes obvious that the lengthening of the antennal segments is not a "primitive" character but is correlated in some way to the mode of life of these mosquitoes. The attitude of alertness which these mosquitoes must maintain to avoid destruction by the excursions of their crustacean host may possibly account for the presence of this extra length of sensory surface.

Finally a fact bearing on Miss Mitchell's new classification of the Culicidæ by antennal characters. Unfortunately for her generalizations, in the subfamily Sabethinæ (Trichoprosoponinæ, Miss Mitchell) the genera *Joblotia* (*Trichoprosopon*), *Lesticocampa* and *Sabethes* have densely plumose antennæ in the male.

Class I, HEXAPODA.

Order V, LEPIDOPTERA.

IN DEFENSE OF INCISALIA HENRICI.

BY PROF. JOHN H. COOK,

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In the Entomological News for April (1907) Dr. Henry Skinner has published an article entitled "*Studies of Thecla irus Godart and T. Henrici Grote and Robinson*" in which he contends that "these two names represent one variable species." Having made an elaborate investigation of these butterflies, and having published* conclusions to which Dr. Skinner has taken exception, I feel called upon to make definite and detailed reply to the article in question.

The concluding sentence reads: "From the evidence before me I am convinced that *Thecla irus* and *henrici* are one species." Let us first inquire into the "evidence" presented in support of this contention.

* Canadian Entomologist, Vol. XXXVII, No. 6 (June, 1905), p 216.